

Fin Facts

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Introduction to the Ornamental Fish Hobby

Becoming a fish hobbysis to fun and it's easy. Tropical. Marine, Pond and Soldfish are healthful. they are entertaining _relaxing__fascinating and educational. They are also good for your health. Recent University studies in the United States have clearly demonstrated that caring for and watching ornamental fish reduces high blood pressure and stress. What a great hobby__learning about the natural environment, enhancing the deciring of your forme, enjoying beaufulf fish. Incentis that





difficult as you might think. Starting with good equipment and following the instructions in this handbook, your introduction to fish keeping will be a success and provide you with countless hours of enjoyment.

As you progress in the hobby, your favorite aquarium dealer can introduce you to more detailed information and sophisticated equipment which will further enhance your knowledge and enjoyment of fish keeping.

Setting Up A FRESHWATER AQUARIUM

Selecting the Tank

Selecting the tank size is important. Changes in water conditions can occur rapidly in a small tank while large tanks can be a burden for a beginner. It is recommended that you purchase a 10 to 20 gallon (38 to 76 illers) tank to start your first aquarium. Avoid tanks that are deep or narrow; you're much better off with a large water surface area and less depth.

All-plass tanks seldom leak, but it is recommended that you check just to be safe. Water weighs a little over bounds per gallon. Place the tank on a level surface that will support the weight. Aquarium stands are specifically designed for this purpose. Slowly fill the tank with warm water. Allow the tank in stand for at least liveniff our hours to make sure there are no leaks.

Once you are sure the tank does not leak, drain and clean thoroughly with a soft cloth dipped into a dilute solution of WARDLEY AQUASALINE* (aguarium salt). Wash all inside surfaces of the tank: do not use

solution of WARDLEY AQUASALINE * (aquarium salt). Wash all inside surfaces of the tank; do not use abrasives, soap or detergents of any kind. Then rinse out the tank thoroughly. Placement of the tank is moortant. A tank should not be placed on top of or close to any heat source, or in

areas of strong drafts, cold or direct sunlight. Remember to choose a location where filters and other apparatus can be serviced easily





Selecting AQUARIUM EQUIPMENT

Temperature Regulation Equipment

Aquarium heaters are essential pieces of equipment for tropical fish. Used in conjunction with an accurate thermometer, a pood thermostatically controlled heater is a necessary investment. Officers respecies of tropical fish have varying temperature requirements, but most are comfortable within a range of 72°-80°F (20°-20°C). Be careful to monitor the water temperature as sudden temperature changes can be harmful to your fish.

Lighting Requirements

A well illuminated aquarium allows better viewing, highlights the color of your fish and promotes live plant and algae growth. An aquarium light will furnis sufficient artificial light for plants and fish if kept lit from 4 to 10 hours a day, depending upon the size of the tank and the wattage employed. There are many offerent types of aquarium light fixtures available, for example, striplight, full hood and canopy lights are available in both fluorescent and incondescent fixtures.

Fluorescent fixtures produce more light per watt of power and give off less heat than incandescent fixtures. Your pet professional can help you select the appropriate light fixture for your aquatic needs.



Filtration Equipment

There are many different types of filters that will efficiently clean and aerate aquarium water.

Undergravel filters, inside box and corner filters. sponge filters and some outside filters are powered by external air pumps.

Power filters are another type of filtering system available for the home aguarium. They are electrically driven water pump units that purify water through a self-contained canister or an outside hanging overflow filter

A majority of the filters mentioned above use fibrous material and activated carbon to purify and clean water. The exception to this is the undergravel filter which creates a biological system within the gravel to clean and purify water. Consult with your local pet professional to determine the proper filtering system for your aquarium.

Decorations

The decoration of an aquarium is purely a matter of taste, therefore the choice is yours Gravels, decorative rocks, ornaments, live and artificial plants sold in aquarium shops are safe. Beware of items that you can collect on your own. For example, beach sand, sea shells, builders gravel and others may be harmful to the aquarium; they may

float freely. Plants, whether living or artificial are usually arranged within the aquarium so that tall plants are in the back part of the tank while shorter plants are situated in the front. Live plants can harbor unwanted animals such as snails and leeches. It is recommended that these plants be immersed for five minutes in a solution of WARDLEY





FILLING THE TANK

If you have chosen an undergravel filtering system, it should be placed into the aquarium at this time. The next

item is aquarium gravel. Aquarium gravel comes in many beautiful colors. The gravel (use approximately two pounds of gravel to each gallon of water) should be washed several times before it is out into the aquarium. Place several pounds in a bucket and allow water to run over the gravel until all dirt has been washed free; don't use soaps or detergents of any kind. The gravel should be higher in the rear of the tank, sloping downward towards the front. A height of 3" in the rear and 1/2" at the front will provide enough slope to cause wastes to accumulate at the front, where they can easily be removed by siphon or dip tube.



Start adding water by pouring it into a cup or deep saucer inside the tank, letting the water gently overflow the do of the cup or saucer. If you pour large stream of water directly onto the gravel, you'll disturb the gravel and cause minute dirt and dust particles to cloud the water.

After the aquarium has been half filled, plants and other decorations can be put in Live plant roots should be pread generously under the surface of the grave for maximum growth. Rooted aquatic plants need to be anchored in the gravel to prevent them from floating to the surface, so cover the plant roots up to crown of the olarit to keen them in place.

Now you can install and test the heating and filtration systems. In doing so, pay strict attention to the instructions provided by the manufacturer of the equipment. After having made necessary last-minute adjustments to decor and equipment, bring the water level to within one inch of the top of the aquarium.





Conditioning the Water

Most communities treat their municipal water supplies with chlorine and chloramine to kill bedreifs. These chemicials are dangerous insite and must be neutralized when making water changes and in new aquarism set-ups prior to the introduction of fish. WARDLEY WORDCHOLDR's and WARDLEY SUPERCHOLDR "and WARDLEY SUPERCHOLDR HUS" immediately removes all traces of chlorine and chloramine with complete safety for fish and painst. They provide a supply of

bottle of ONE DROP SUPERCHLOR will treat 220 gallons (830 liters) of water. SUPERCHLOR PLUS in a one ounce bottle treats 145 gallons (650 liters), neutralizing heavy metals such as copper, iron, zinc and lead, adds electrolyses to reduce stress and adds proteins to the water, enabling the fish to build up their protective slime contino.

A day or so after set-up you might notice that your water is cloudy. This cloudiness is caused either by the proliferation of bacteria or suspended particles. The cloudiness will soon disappear as the bacteria de of, but you can hasten their disappearance through the use of WARDLEY CLEAN SWEEP™ which quickly clears up cloudy adulation water.

AQUARIUM WATER TESTING

Your aquarum water has many characteristics in addition to its temperature. Two of these characteristics, pH and hardness, can directly affect your fish. It is recommended that you test your aquarium water repulariv to maintain the water quality within ranges of acceptability.







The pH of water is a measure of the number of hydrogen ions it contains; the number determines the water's relative acidity or alkalinity. The pH is measured on a scale ranging from 0 to 14, with acidic water testing out as less than 7 and alkaline water testing out as higher than 7. A pH of 7 is neutral, it is neither acidic nor alkaline.



Each degree on the scale represents a considerable difference because the pH scale is logarithm in function; a pH of 8 is ten times more alkaline than a pH of 7, one hundred times more alkaline than a pH of 8, one purpose to 5 to 7.5 is suitable for most tropicals. Some Africar RITL take cibrilds prefer a high pH level, while other tropicals such as tetras and rasboras prefer a lower DH level. especially for poxeming.

The WARDLEY JUNIOR pH TEST KIT is easy to use to measure the pH of your aquarium water. The WARDLEY DELUXE SENIOR pH TEST KIT will not only measure the pH but also includes the products to

change pH levels up or down. Drastic changes in the pH of water are very dangerous to the fish. To avoid such fluctuations, you can use buffering chemicals that help the water resist rapid pH changes. WARDLEY BULLSEYE" is a liquid pH stabilizer that automatically maintains a constant pH level. BULLSEYE is available in three pH levels : 6.5 (to provide acidic water); pH 7.0 (to provide neutral water); and pH 7.5 (to provide alkaline water). Use of the different BULL SEYF products allows you to maintain multiple tanks with differing pH values according to the demands of the species involved. Some highly alkaline hard water may be naturally resistant to change in pH. If initial determination is far from the desired pH level (for example the water in your tank is 6.2 and the targeted pH level is 7.0), add some WARDLEY SODIUM BICARBONATE OR SODIUM BIPHOSPHATE to get within desired range (within 3 tenths of target number), then lock in with WARDLEY BULLSEYE 6.5, 7.0 or 7.5 as required.



Water Hardness

The relative softness or hardness of aquanum water depends on the amount of dissolved mineral salts, chiefly calcium and magnesium. The minerals that cause hardness are measured in parts per million (ppm). 50 ppm is considered soft water and above 200 ppm is hard water. The presence of limestone and other calcium-rich substances (such as shells) tend to make water hard. As evaporation occurs, minerals are left in the aquarium causing an increase in the hardness level of the remaining water. Your retail pet store can test your water and will advise you if the hardness level is suitable for the species chosen.



Number of Fish in the Aquarium

The number of fish you can safely put into your aquarium depends upon several factors: the size and shape of the tank, the type and size of fish and the filtration and aeration systems used. A general rule used in determining how

many fish in an aquarium is one inch of fish per gallon of water Larger fish need more surface area than smaller fish. The type of fish is important too; some species do not require as much surface area as others. Bettas and

gouramis for instance, are able to breathe air to some extent. They are less dependent on the water in the tank to provide oxygen. Your local pet store can advise you on how many fish can safely be maintained in your tank.

Regardless of the number of fish that are in your aquarium, you must make a monthly partial water change. Siphon approximately one third of the water from the bottom of the tank to reduce the accumulation of dissolved wastes. Changing the water is critical in a heavily populated aquarium where pollutant levels build up quickly Remember replacement water must be the same temperature as the water removed from the aquarium BULLSEYE



Condition new water with WARDLEY SUPERCHLDR or SUPERCHLDR PLUS and adjust pH with WARDLEY

EXAMPLE 2

(or Cardinal)

6 neon

4 White

Tetras

The Community Tropical Tank

EXAMPLE 1 2 Black Tetras 2 Glowlight Tetras 1 Female Betta

6 Guppies

4 Platies

Clouds 2 Rasboras 2 Angelfish (25 to 50 cent size) for your first tank is that they be compatible with each other in general requirements (temperature, water condition, etc.) Concerning temperament, it is a fact that some fish are more aggressive than others; for example Tiger Barbs, Dscars, Dempseys and most other Cichlid species. If you prefer these types of fish it is recommended that you maintain them with their own species of similar size. Most other non-aggressive

tropical species of similar size can be

maintained together in a community

Your main consideration in choosing fish

aquarium. In the two examples on the left, all of the fish will live together peaceably in a filtered and heated 10 gallon (38 liter) aguarium. To begin with, all of the fish should be small 1/2" to 1" (11/2 to 21/2 mm): any that grow too large should be moved to another tank. In these lists, the angelfish would be the only ones having the potential to greatly outgrow tankmates.

Introducing Fish into the Aquarium

Make sure that the water in your aguarium and the water in the fish bag are approximately the same temperature. The water in your tank can be a degree or two warmer, but should not be conter. To equalize the two temperatures, keep the fish in the bag and float it for about 15 minutes in the tank, During this time make a number of exchanges of water from the bag with equal amounts of water from the tank While the fish are in the bag, if they show any sign of distress.

especially

gasping at the surface. immediately release them into the tank. You should also pay attention to the pH levels of the water. Use WARDLEY BULLSEYE in both the aquarium and the bag to equalize the pH level. As time goes by you will be introducing additional fish to your tank. Observe these fish closely before adding them as sick fish can transmit their illness to the fish already in your tank. Fish that behave listlessly, have clamped fins. swim with abrupt motions or gasp at the surface should be isolated in a holding tank and treated with WARDLEY PROMETHYASUL® until their

condition

improves



The feeding habits of aquasium Siches are dependent upon several important factors, chied among them being the water temperature and the amount of oxygen available. As a peneral hule, the higher the temperature her water, the greater the food requirements of the fish and the lower the amount of oxygen available. Topical fish originating from countries having warm climates must have high water temperatures. Warm-vater fishess life the second of the properature of the second size of th

Prepared tropical fish foods are available in different forms including flakes, pellets (sinking and floating) float provined, sun dned and granular. Foods are formulated for a variety of fish and tailored to the habits of a particular croup of fishes. WARDLEY FLAKE FOODS WARDLEY researchers spent years evaluating the various failer products available and have developed an advanced line of flake toods. The result— the finest array of flake foods ever offered to aquarum hobbysits anywhere in the word. Over 40 years of experience in mameratal fils nutrition stand behind every WARDLEY FLAKE FOOD You can feet WARDLEY FLAKES with confidence that the important nutritional requirements of ornamental fish have been inconcreated in these water finit flakes.



Wardley
WARDLEY
TOTAL
TROPICAL

fish. It is formulated from premium marine and plant ingredients, the food is naturally colored and contains natural color enhancers. TOTAL TROPICAL provides an extraordinary diet ensuring better metabolic responses, faster attraction to the food, brilliant color and improved

overall health and vitality of all tropical fish.

wardley Boste Flolus

acids, lipids, vitamins, minerals and trace elements required for the maintenance, growth, color, and vitality of all aguarium fish.

BASIC FLAKES

is a nutritionally

rich daily diet

formulated for

This advanced

essential amino

tropical fish.

contains the

formula

Wardie buditioning

WARDLEY
CONDITIONING
PLUS™ is a
high protein
growth food
enriched with a
high proportion
of natural
vegetables and
other plant
materials

including spirulina algae. This dual formula precludes the need to feed separate growth and vegetable foods. CONDITIONING PLUS is suitable for promoting growth in young fish. This product is excellent for herbivorous cichlids and other brackish water fishes.

WARDLEY FLAKES have secelent floating characteristics. All fake formulas contain our evolusive Wardtech "multifurant insupplement I his vidami profile meets or exceeds the recommendations of the National Research Council (MRC), National Academy of Sciences. In addition all WARDLEY FLAKES contain a new stabilized from of Vidamin "C. Aquade organisms manufacture limited amounts of ascorbic acid (Watmin C) for their normal body processes. During periods of stress. Watmin G is rapidly depleted, affecting the ballot to inself desease, promote natural wound healing and enhance bore development. The Vidamin G used in our processing and extended periods of storage. Young growing aquatic animals require additional amounts of Vidamin C to sustain normal growth.





WARDLEY SPECTRA IV is a balanced blend of nutritionally rich ingredients that promote the health and natural coloration of all aquarium fish.

SPECTRA IV is the ultimate in color enhancing foods. It contains carotenoids and other natural occurring pigment compounds that impart the natural brilliance to aquarium fish.



WARDLEY
TOTAL
GOLDFISH is
the most
advanced
coldwater flake
food ever
developed for
feeding all
varieties of
poldfish. The

first vitamin fortified formula developed to help protect fish from environmental stress, TOTAL GOLDFISH contains natural attractants. Naturally colored flakes with stabilized Vitamin C make TOTAL GOLDFISH the ultimate goldfish food.



WARDLEY GOLDFISH FLAKES is a nutritionally rich food formulated for all varieties of goldfish. This advanced dual flake formula blend is made from a variety

of natural plant and animal components. GOLDFISH FLAKES is especially formulated for goldfish with a balance of protein, carbohydrates, lipids, vitamins, and minerals.



All WARDLEY FLAKE FOODS are manufactured at Wardley's ultramodern production facility in Secaucus, New Jersey. WARDLEY FLAKE FOODS are available from your favorite retail counter.





WARDLEY GUPPY FLAKES is a superior flake food formulated from over 20 natural ingredients. This formula contains the required nutrients for healthy and colorful guppies and is specially sized for these smaller tropical fish.

WARDLEY CICHUIO FLAKES provides a superior balanced diet for optimal growth, coloration and health of all carnivorous and herbivorous cichilids. This advanced formula is enriched with a variety of plant and animal materials including algae and plankton. It is an especially nutritious food for cichilids from the Great Lakes of Africa. Central and South America.



WARDLEY TOTAL MARINE: "FLAKES is the most advanced flake food specifically formulated for feeding coral reef fishes maintained in aquana. This flake formula primarily contains marine animal and plant materials such as marine aloae.

squid, plankton, shrimp, crab and fish. The use of these premium ingredients provides a full range of essential amino acids and a high percentage of essential HURA (highly unsaturated fathy acids) which is critical in the diets of manne fishes. TOTAL MARINE FLAKES contains a major pigment found in coral, sea anemones, sponges and crustacea that will intensify the natural coloration of marine fish

FREEZE DRIED FOODS

Freeze drying is an excellent process for the preparation of fish foods, because it allows the foods to retain their natural high protein attributes. When placed in the aquarium, freeze

dried foods absorb moisture and reconstitute closely to their original form. Certainly, freeze-dried foods are among the most natural foods available and this is why fish accept them as readily as they do.

FREEZE-DRIED TUBIFEX WORMS

Fresh from the ponds of Asia these high protein natural worms have a special advantage, they can stick to the aquarium glass. This is excellent as it ensures feeding fish at different levels in the tank. Bottom-feeding catfish, for example, can enjoy their food near the bottom of the tank. Top-feeding live bearers can feed near the top while mid-water feeders such as tetras can enjoy this food near the middle of the tank.



FREEZE-DRIED BRINE SHRIMP

This natural protein rich food easily crumbles into minute particles, perfect for feeding baby fish. WARDLEY FREEZE-DRIED BRINE SHRIMP is an excellent supplemental food for all manne, tropical and goldfish.



PACIFIC PLANKTON

WARDLEY FREEZ-DRIED PLANKTON and KRILL are very high-profile, color enhancing, natural foods consisting of whole individuals of marine consistonase. WARDLEY FREEZ-DRIED KRILL consists of large crustaceans. Euphausia superba. WARDLEY FREEZ-DRIED PAGIFIC PLANKTON are a smaller species of marine crustaceans. Euphausia paordice, abort foods are eagerly accepted by freshwater and marine tropicals.







Wardley Brine Shrimp

Brine Shrimp

FOR ALL AQUASIUM ESH MET WY 14 OZ 140 ST

wardley

Krill
EZF-OHED EUPHAUSIA SUPRI

wardley

Pacific Plankton FREEZE-ORED

> TROPICAL AND MARKER NET WT 67 OZ (190 g)



WARDLEY DIAL-A-DIET™

WARDLEY DIAL-A-DIET allows the aquarist to feed a wide range of both animal-based and plant-based proteins, with a blend of vitamins, minerals and fats that provide the diversity needed for a balanced nutritional program. Each







WARDLEY DIAL-A-DIET comes in a transparent, break-resistant compartmented container that stores four different foods in separate chambers. To obtain the food you want to feed, just rotate the cover to the number of the food you have selected.

WARDLEY DIAL. A-DIET: "for GOLDFISH Contains Wlamin-enriched Flakes, Conditioning Sinking Pellets, Pure Whole Shrimp and Floating Pellets WARDLEY DIAL. A-DIET: "for TROPICALS contains Basic Flakes, Floating Pellets, Freeze-Drode Pacific Plankton and Spectra IV Color-Enhancing Flakes, WARDLEY DIAL. A-DIET: "for CIOKLING Sociation Sichici Flakes, Sinking Pellets, Freeze-Dred Pacific Pankton and Floating Pellets.

Vacation Feeding

While you are on vacation you do not have to worry about feeding your fish. WARDLEY WACATION FOOD SHELL ? is impegnated with froot particles that slowly relase nutrients automatically as the shell rissolves Each Varaction Food Shell will last from ten days to two weeks in a 10-pallon (36 liters) aquarism at a temperature of 22° (22° C) (NTE during summer months be aware the temperature in a cisced home could cause your aquarism water temperature for see will above 80°, (27° C) please take steps to insure that this does not occur! If you argoing to be aware for only a weekend or so, you can use WARDLEY WEEKENDE FEEDER. The Weekend Feeder package contains four small shells, and each shell is good for two to three days in a 10-gailon (38 liter) against mat a temperature of 22° (22° C). WARDLEY WACATION FEEDER are available in three different formulations. Origina, Plankton and Pelleted Food. Weekend and Vacation Foods are available in three different formulations.

ssolve properly in highly alkaline water. Since is his normally feed in daylight, it is recommended that you leave the light on in your dasheso or connected to an automatic timer. Upon your return, remove any uneaten portion of the shell and discard. Weekend and Vacation Foods must only be used in aquariums equipped with filtration and eartain, as the water must circulate for the proper dissolving of the shell.





PELLETED FOODS

Pelleted foods are available in both sinking and floating types.

EXPANDED ELOATING PELLETED FOOD

The Wardley TEN™ series of floating pellets represents Total Essential Nutrition for your aquatic animals. These formulas have excellent amino and fatty acid profiles and

are derived from natural incredients. These formulas are matched to the specific dietary needs of Tropicals, Cichlids, Goldfish, Koi, Pond fish and Aquatic Reptiles.

Our TEN formulas contain our exclusive Wardtech " Multivitamin Supplement* and a new stabilized form of Vitamin C. Aquatic organisms manufacture limited amounts of Ascorbic Acid (Vitamin C) for their normal body processes. During periods of stress. Vitamin C is rapidly depleted, affecting the ability to resist disease.

promote natural wound healing and enhance bone development. The Vitamin C used in our formulas is up to 83 times more stable than traditional forms of Vitamin C, therefore retaining its potency during processing and extended periods of storage. Young growing aquatic animals require additional amounts of Vitamin C to sustain normal growth.

*Except Reptile Formula

TROPICAL TEN™ is a high protein formula designed for feeding tropical fish in a community aquarium environment. It is a well balanced, nutritionally sound formula enriched with shrimp and natural color enhancers. It is an excellent daily food for tropicals, especially carnivorous and omnivorous species. Tropical TEN is available in small and medium size pellets.

CICHLID TEN' has been designed to meet the specific dietary requirements of all Cichlid species including Oscars. This nutritionally balanced formula contains a variety of plant and animal ingredients (ex. fish, shrimp and spirulina). Cichlid TEN is available in medium and large pellets.

GOLDFISH TEN™ is available in two distinct formulas, small pellets for juveniles and medium pellets for adults. The higher protein juvenile formula is designed to meet the increased energy requirements of young growing goldfish. The adult formula is formulated for daily feeding of full-grown goldfish, including fancy varieties. It is the perfect staple food for all goldfish. Both formulas contain natural color enhancers for the rich yellow, orange and red color desired in goldfish. The natural added color enhancers. matched to the biochemistry of the goldfish, eliminate the need to feed separate color enhancing goldfish foods.

KOLTEN™ Utilizing the vast amount of research and information available on koi nutrition, Wardley has developed the most advanced nutritionally complete formulations for juvenile and adults in two pellet sizes, medium and large. In quality, nutrition, and performance these formulas are comparable to Koi feeds in the Far Eastern tradition. Both have excellent amino and fatty acid profiles and a full complement of supplemented vitamins. These premium













ardle

pellets eliminate the need to feed supplemental foods like color enhancer, Vitamin E or breeding formulas. Natural color enhancers derived from the added ingredients in the formulation assure the natural reds and oranges highly prized and desired in kol.

WAROLEY POND TEN "Is a nutritionally balanced, concentrated food formulated for all pond fish, POND TEN "the heavyweight" feeds up to four times more fish than competitive brands due to its higher bulk density. This highly digestible formula is specifically designed to meet the energy needs of koi and goldfish, POND TEN contains color enhancers to bring out the natural coloration of pondfish.

REPTILE TEN " is the most complex of any aquatic reptile formula available. It is comprised of more than 23 ingradients including fish meal, algae, bloodworms and insect larvae. The formula contains a full complement of vitamins as well as essential minerals for normal shell growth in turtles. When feeding REPTILE TEN Floating Sticks no supplemental foods are normally required.

SINKING PELLETED FOOD



Sinking pelleted foods an designed for bottom feeding fish, for example: Londsex, Cuttin-) Presostions and entain special collections of Children State (1997). The state of Children and Goldfish. These pellets are matched to the special Children and Goldfish. These pellets are matched to the special citizen years of Topicals——WARDLY SHRIMP PELLETS and WARDLY SRIME SHRIMINP PELLETS, Clinidis——WARDLY SHRIME SHRIMINP PELLETS, Clinidis——WARDLY SOURCE ON CONTROL OF CONTROL



MISCELLANEOUS FOODS

Floating/Sinking Foods

Wardley produces a varely of floating/sinking tools iseal for community fairles with this, middle and bottom feeting fish. The form of these foods is either a pellet, a bit or a granule. The form of these foods is either a pellet, a bit or a granule. The form of these foods is either a pellet, a bit or a granule. WARDLEY COMMUNITY BITES" for IRPOPCIALS. WARDLEY COMMUNITY BITES "for IRPOPCIALS. WARDLEY COMMUNITY BITES "for IRPOPCIALS." and other Circlinis WARDLEY TOTAL MARINE PELLETS" for all Marfine fish. WARDLEY GOLDPISH FOOD an economical food for smaller polifish varieties.

Sun Dried Foods

Wardley sun dried foods are a high protein natural Acetus Shrimp food supplement.
WARDLEY SHRIMP DELITE " for larger tropicals, WARDLEY GOLDFSH DELITE " for larger goldfish and pondfish,
WARDLEY TURTLE DELITE " for Aquatic reptiles and WARDLEY TURE CRAB FOOD for Hermit Tree Crabs.

Liquid Foods

Wardley liquid foods are a high protein, baby fish food in an easy to feed tube. WARDLEY SMALLFRY® LIVEBEARER and EGGLAYER formulations are designed to meet the nutritional requirements of baby fry.











Shrimp Delite









7

BREEDING AQUARIUM FISH

There are two major divisions among tropical fish: Invebearers and egglayers. Livebearing fish give birth to fully formed young; the babies develop completely within the mother and are capable of swimming immediately upon release from her. While egglaying species lay eggs and hatch smaller fry The most popular livebearing species are quiples, pallers, swortfalls, and mollles.

BREEDING THE LIVEBEARERS

Newborn Ivebearers have to be protected from other adult fish (including their parents); otherwise they will be eaten. The best way to save baby livebearers is to move the mother to a separate tank with several floating plants. If a sparate tank is not available, use one of the breeding "traps" available in pet shops. Do not put baby livebearers in with adult fish until they have grown substantially





To raise baby livebearers you must keep them warm (76° to 80°F, with 78°F optimal) (24°C to 27°C with 26°C optimal) and feed often with a wide range of foods.

INMUNIOLEY SMALERY (Liebeauer Formula) should be the first food fed at it is specifically formulated for baby liebeauers, but it should not be an exclusive det. Al WAPDLEY is froot sin flake form especially WARDLEY TOTAL TROPICAL and SPECTRA W. and some of the pelled and granular floots, like TROPICAL TEM, are easily crumbled and ground into particles small enough for ity Baby ground into particles small enough for ity Baby but only as much as they will consume within five mituses at each feeding.



BREEDING THE EGGLAYERS

The method egalwers use to lay ther eggs varies depending upon the species. Some scatter the eggs at random, others Jacabe them among plants and plant roots, some attach them to rocks or large plant average while others build floating mests in which to deposit them. Some species guard them should be provided them while househing, and other species guard them while househing, and other species guard them while househing, and other species got settled to be about 50 miles of the species of the specie

Upon hatching, egglayers are much smaller than livebearer fry, which makes them more difficult to feed. WARDLEY SMALLFRY (Egglayer Formula) is a fine food for newly hatched fry.

The baby egglayers will soon need a variety of toods, and should be fed often. All Wardley flake, pelleted and granular foods are easily crumbled and grund into particles small enough for baby egglayers. We also recommend Wardley Freeze-Dried Bines Shrimp as an excellent fine powder food easily ingested by free swimming egglaying for, 4s the bables grow it will no longer be necessary to grind and crumble their Wardley food.



Tropical Fish

The most popular omamental fish maintained in home aquaria are tropical fish. The reason for this popularly is due to the fact that tropical fish are readily available and easy to maintain. There are many unique varieties and they are reasonably priced. Some of the more popular and readily available species are Mollies. Guppies. Swortdails.

more popular and readily available species are; Mollies, Guppies, Swordalis, Platys, Danios, Barbs, Hatchetfish, Tetras, Gouramis, Freshwater Sharks, Catfish, Bettas, Loaches, Killifish and Plecostomus.

Popular Species of TROPICAL FISH	Characteristics	Feeding Recommendations	
	Marble Hatchet Peaceful commanity aquarium tempera- ment Average water conditions — pH 6 5 to 7 0 Temperature — 75 to 78 degrees F Egglayer, swims mid-rage and in groups, enjoys densely planted aquariums	Total Tropical Flake Food, Community Bites, Freeze- Dried Plankton (supplement) Freeze-Dried Tubifex (supplement)	
	Black Totra Peaceful community aguarum tempera- Peaceful community aguarum tempera- Peaceful community aguarum tempera- Peaceful community aguarum - 1/5 to 7/8 degrees F Egglisyer, swims mail-tange and in groups, enjoys densely planted aquarums	Total Tropical Flake Food Community Bites, Freeze- Dned Plankton (supplement) Freeze-Dned Tubifex (supplement)	
	Bleeding Heart Tetra Peaceful community aquarum tempera- ment. Average water conditions — 9H 5 5 to 70. Temperature — 75 27 Begress F. Egglayer, swims at all levels and in groups, emplys planted and rocky aquarums	Total Tropical Flake Food, Community Bites, Spectra IV (supplement), Freeze-Dried Plankton (supplement)	
	Serpae Tetra Peaceful community aquarum tempera- ment Average water conditions — 91-5 to 70 - 0 egrees 5 5 to 70 1 memperatine — 75 to 78 degrees 5 5 gglayer, swims at mid-range and in groups, enjoys densely planted aquarum	Total Tropical Flake Food. Community Briss, Spectra IV (supplement), Freeze-Oried Plankton (supplement)	
18 mars	Penguin Tetra Peaceful community aquanium tempera- ment. Average water conditions— p. H. 5 to 7 0. Temperatine— 7.5 To 8 degrees 5 Egglayer, swims at mid-range and in groups, enjoys densely planted aquarium.	Total Tropical Flake Food, Community Brites, Freeze- Dned Plankton (supplement) Freeze-Dried Tubifex (supplement)	
	Cardinal Tetra Peaceful community aquarium temperament Average water conditions — pH 6 5 to 7 0 Temperature — 75 to 78 degrees F Egolayer swims at met-range and in large groups, enjoys density planted aquarium	Total Tropical Flake Food, Community Bites, Freeze- Dried Plankton (supplement), Freeze-Oned Brine Shrimp (supplement)	

Popular Species of TROPICAL FISH	Characteristics	Feeding Recommendations
- Common	Annews Corydoras Catlish Peaceful community aquarum tempera- ment Average water conditions — pH 7 0 to 7.5 Temperature — 75 to 78 degrees F Egglayer, swims at bottom range and feeds on bottom, enjoys planted and rocky aquarum	Shrimp Pellets (sinking), Scavenger feeder which feeds off excess food and waste found in the aquarium
	Pleastomus (Algae Ester) Peaceful community aquarium tempera- ment Average water conditions — pH 6 5 to 70 Temperature — 75 to 78 degrees F Egglayer, swims at bottom range and feeds on bottom, enjoys planted and rocky aquarium	Conditioning Plus, Algae eater who feeds off algae in the aquarium
9	Common Guppy Peaceful community aquarium tempera- ment. Average water conditions — pH 6 5 to 70 Temperature — 75 to 78 degrees F Livebearer, generally sold in pars (male/ female), serims at mid-arage, enjoys planted and rocky aquarium	Guppy Flakes, Total Tropical Flake Food, Spectra IV (supplement), Freeze-Oned Bloodworms (supplement)
	Gold Crescent Platy Peaceful community aquarium tempera- ment. Average water conductors	Total Tropical Flake Food Tropical T.E.N. Small Pallet Freeze-Dried Plankton (supplement), Freeze-Dried Bloodworms (supplement)
0	Red Wag Platy Peaceful community aquarium tempera- ment. Avetage water conditions — pH 7 D to 7.5 Temperature — 75 to 78 degrees F Livebearr (can be purchased in pars), swims at mid-range enjoys planted and rocky aquarium.	Total Tropical Flake Food. Tropical TE N Small Pellet Freeze-Dried Plankton (supplement) Freeze-Dried Bloodworms (supplement)
	Sussel Variatus Peaceful community aquarium tempera- merit Average water conditions — 9H 7 0 to 7.5 Temperature — 7.5 to 78 degrees F Livebearer (can be purchased in pairs), swims at mid-range, enjoys planted and rocky aquarium	Total Tropical Flake Food, Tropical TE N. Small Pellet, Freeze-Dned Brine Shrimp (supplement), Freeze-Dned Bloodworms (supplement)
	Green Swordiail Peaceful community aquarium tempera- ment Average water conditions — 91 to 10 75 Temperature — 75 to 78 degrees F Livebeare (can be purchased in pairs), males have swordial, swim at mol-dange, enjoys planted and rocky aquarium	Total Tropical Flake Food Tropical TE N Small Pallet, Freete-Dned Brine Shrimp (supplement) Freeze-Onad Bloodworms (supplement)
	Red Brick Swordtail Peaceful community aquarium tempera- ment. Average water conditions — pil 7 ot o 7.5 Temperatur — 75 to 78 degrees F Livebearer (can be purchased in pars), males have swordsail, swims at 4md-range.	Total Tropical Flake Food. Tropical TE N. Small Pellet Freeze-Dried Brine Shrimp (supplement), Freeze-Onied Bloodworms (supplement)

males have swordtail, swims at mid-range, enjoys planted and rocky aquarium

Popular Species of TROPICAL FISH

Characteristics

Feeding

Recommendations



Red Velvet Wag Swordtail

Peaceful community aguarium tempera ment Average water conditions — pH 7 0 to 7.5 Temperature - 75 to 78 degees F Livebearer (can be purchased in pairs). males have swordtail, swims at mid-range. Total Tropical Flake Food



Green Hi Fin Molly

(supplement), Freeze-Bried



Peaceful community aguarium temperament. Average water conditions - pH 7.0 to 7.5 Temperature - 75 to 78 degrees F Livebearer (can be purchased in pairs) swims at all ranges, enjoys planted and

Total Tropical Flake Food. Conditioning Plus Community Bites, Feeds on algae that grows in the



rocky aquanum Black Lyretail Molly

Peaceful community aguarium temperament Average water conditions - pH 7 0 to 7.5 Temperature - 75 to 78 degrees F Livebearer (can be purchased in pairs). swims at all ranges, enjoys planted and rocky aguarium

Total Tropical Flake Food, Conditioning Plus, Community Bites, Feeds on algae that grows in the



Marble Molly

Peaceful community aguarium temperament Average water conditions - pH 7 0 to 7.5 Temperature - 75 to 78 degrees F Livebearer (can be purchased in pairs). swims at all ranges, enjoys planted and rocky aguarium

Total Tropical Flake Food. Conditioning Plus. Community Bries, Feeds on algae that grows in the



Tiger Barb

Can be kept in community aquarium with fish of its own size - more appressive behavior Average water conditions - pH 6 5 to 7 0 Temperature - 75 to 78 degrees F Egglayer, swims at all ranges, enjoys planted and rocky aguarium

Oligolopis Barb (Checkerboard Barb)

Can be kept in community aquarium with

Total Tropical Flake Food. Freeze-Dried Tubifex



fish of its own size — more aggressive behavior Average water conditions - pH 6 5 to 7 0 Temperature - 75 to 78 degrees F Egglaver, swims at all ranges, enjoys

Total Tropical Flake Food. Freeze-Dried Tubrlex (supplement)



Can be kept in community aquarium with fish of its own size — more aggressive behavior Average water conditions - pH 6.5 to 7 0 Temperature - 75 to 78 degrees F Egglayer, swims at all ranges, enjoys

Total Tropical Flake Food. Dried Plankton (supplement), Freeze-Bried Tubifex



Clown Loach (Botia)

Peaceful community aquarium temperament. Average water conditions - pH 6 5 to 7 0 Temperature - 75 to 78 degrees F Egglayer, swims at bottom range, feed as a scavenger at bottom range, enjoys planted Shrimp Pellets (sinking), Scavenner feeder which feeds off excess food and waste found in the aquarium

Popular Species of TROPICAL FISH

Characteristics

Feedina Recommendations



Rashora Heteromorpha

ment. Average water conditions -- pH 6.5. Epplayer, swims at all ranges and in groups.



Zebra Danio

Peaceful community aquarium temperament. Average water conditions - pH 6.5 Egolaver, swims at all ranges and in large groups, very active in aquarium, enjoys

Total Tropical Flake Food



Pearl Danio

Peaceful community aquarium tempera-Eoplayer, swims at all ranges and in large Total Tropical Flake Food Community Bites, Freeze-



White Cloud

planted and rocky aquarium

Peaceful community aquarium temperament. Average water conditions - pH 7.0 Egglaver swims at all ranges and in groups. Total Tropical Flake Food



Red Toll Shark

to 7.5 Temperature - 75 to 78 degrees F Egglayer swims at all ranges feeds as a scavenger at bottom range, enjoys planted Scavenger feeder which



Kissing Gourami

Peaceful community aquarium temperament. Average water conditions --- pH 6.5. Egglaver, swims at mid-range enjoys

Total Tropical Flake Food.



Blue 3 Spot Gourami

Peaceful community aquarium temperament. Average water conditions - pH 6.5 Total Tropical Flake Food



Bettas — Siamese Fighting Fish

ment. Average water conditions - pH 7.0 should be kept in an aquarium

Total Tropical Flake Food

The Cichlide

The family Cichlidae encompasses a wide range of popular tropical species. Cichlids vary greatly in shape, size, color, breeding habits and temperament. The more popular varieties include the Dscar and Jack Dempsey, as well as smaller cichlids such as Rams and Apistrogrammas. In addition, there are the highly active and colorful rock-dwelling Rift Lake cichlids from Africaand the ever-popular and fascinating Discus and Annelfish

Cichlids in general should have plenty of room since they stake out and defend territories in the tank, especially at breeding time. Many of the African Rift Lake cichlids prefer rocks, caves and stony hiding places in their tank. Some cichlids constantly uproot plants. Rift Lake cichlids require hard, alkaline water, while American cichlids prefer softer and less alkaline water. Cichlids prefer warm water. 72° to 79°F (22° to 26°C) is a good range for them, while 83°F (28°C) is suitable for spawning.

Cichlids are voracious eaters. WARDLEY TOTAL TRDPICAL, CICHLID BITES and CICHLID TEN (floating pellets) are formulated to meet the dietary needs of all cichlids. They contain vegetable proteins required by all species and are especially good for African Rift Lake cichlids. WARDLEY CICHLID PELLETS (sinking pellets) contain a higher proportion of meaty substances and are perfect for carnivorous types especially the larger bottom feeders. Both flakes and pellets are enriched with spirulina algae and pacific plankton to supply a broad nutritional profile. Cichlids benefit from variety in their diet. Larger cichlids will eagerly accept WARDLEY FREEZE-DRIED KRILL and SHRIMP DELITE, and smaller cichlids will enjoy WARDLEY FREEZE-DRIED TUBIFEX WDRMS and PACIFIC PLANKTON, WARDLEY DIAL-A-DIET for CICHLIDS, provides an excellent variety of four different foods, including flakes, sinking pellets, freeze-dried Pacific Plankton and CICHLID TEN floating pellets













wardley Keill



wardiev Shrimo Delite

wardle Tubifex Worm



Popular Species of CICHLID FISH	Characteristics	Feeding Recommendations
	Common Silver Angel Can be kept in community aquarium with fish of its own size — more aggressive behavior. Average water conditions — pit 6 5 to 7 0. Temperature — 75 to 78 degrees F. Siguipurs awais at all ranges and in pairs, enjoys planted and rocky aquarium.	Cichild Flakes, Cichild Bites Cichild T E N Medium Pellet Total Tropical Flake Food Freeze-Oracd Plankton (supplement)
	Discus Fish Hard to keep in community aquanium. Water conditions — pH 6.5 Temperature — 84 to 86 degrees F Equiyeer, savins at ill ranges, enjoys densely planted aquanium.	Total Tropical Flake Food Cichlid Bites, Cichlid T.E. N Medium Pellet. Cichlid Flakes
	Gold Severum Can be kepf in community sequation with fast of its Can be kepf in community sequation with fast of its conditions—of # 7 bits 7.5. Temperature — 75 to 78 degrees F Engliever, swims a all ranges and in pairs enjoys planted and rocky aquanium.	Cichlid Flakes, Cichlid Bites Cichlid TE N, Medium Pollet Total Tropical Flake Food Freeze-Oned Plankton (supplement)
	Festivum Can be kept, in community aquanium with fish of its own staz — more aggressive behavior. Average water conditions.—pl # 7 bio # 5 Temperature.—7 5 to 78 degrees F Egglaver swims all rappes and in pairs, enjoys planted and rocky aquanium.	Cichiid Flaxes Cichiid Bites Cichiid T E N Medium Pellet Total Tropical Flaxe Food Freeze-Oried Plankton (supplement)
	Owarf Flag Cichild Can be kept in community aquanum with fish of its own star—more aggressive behavior. Average water conditions—pH 6 5 to 7 0 Temperature—7 5 to 78 degrees. Flegaliyers, sums a all ranges and in pairs, enjoys planted and rocky aquanum.	Cichlid Flakes Cichlid Bites Cichlid T.E.N. Medium Pellet, Total Tropical Flake Food, Freeze-Oried Plankton (supplement)
	Blue Ramirezi Can be kept in community aquanium with fish of its own size — more aggressive behavior. Average water conditions — pH 6 5 to 7 0. Temperature: — 75 to 78 degrees F Egplayer, summs all ranges and in pairs, enjoys planted and rocky aquanium.	Cichlid Flakes, Cichlid Bites, Cichlid TE N. Medium Pellet Total Tropical Flake Food, Freeze-Ored Plankton (supplement)
	Fire Mouth (Meek) Due to its size and aggressive behavior should not be kept in community aquanium but only with fish of its own temperament and size range. Average water conditions — pil 6 5 to 7 0 temperature — 75 to 78 degrees F Egglayer, swims at all ranges and in pairs, enjoys planted and nockly applied.	Cichlid Bites Cichlid TE N Large Pellet, Freeze-Oried Krill (supplement) Freeze- Oried Plankton (supplement)



Due to its size and aggressive behavior, should not be kept in community aguarium but only with fish of its kept in community aquanum but only with fish of its own temperament and size range. Average water conditions — pH 6.5 to 7.0. Temperature — 75 to 78 degrees F. Egglayer, swims at all ranges and in pairs, enjoys planted and rocky aquanum. Krill (supplement), Freeze-

Marine Fish



The most beautiful and colorful animask that can be maintained in a home aquarium are marine (saltwart) coral med fish and invertextrates. When you own a marine aquarium, your horizons are limited only by the size of the tank. Some of the more common marine species that do well in home aquaria are Clowns, Wassess, Tangas, Angles, Mandarines and Damsels. Your local retail pet professional can properly direct you to the necessary information and supposes that can enhance the ownership of the marine aquarium.

Saltwater fish have a great sensitivity to changes in the water composition. Pollution in the marine tank can have a more serious consequence to the fish than in a freshwater tank. For this reason, food for marine fish must be formulated with two specific requirements; it must be consumed quickly so as not to pollute the tank, and the food

must be fully assimilated by the fishes' digestive systems. This will cut down on organic pollutants in the form of undigested foods passed by the fish.

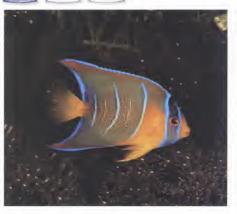






Wardley Krill





Popular Species of MARINE FISH	Characteristics	Feeding Recommendations
B	Common Clownlish or Anemone Demoiselle Hardy sociable coral reef rish from Indo-Paschi region are data for the marine Commonly accurar un- Paschallage to deserve this symbolic businessed loped and the common of t	Total Marine Flake and Pellet, Freeze-Dried Kniff
A STATE OF THE STA	Queen Angelfish This beaufful and breathtaking angel fish is from the Canobean The Queen Angelfish is speaceful and must be maintained in a large aquarum as it will grow to 10 inches (25 cm) Speache Grayty — 1 022 Temperature — 7 (25 C). The Queen Angelfish swims and Feeds of all levels.	Total Marine Flake and Pellet, Freeze-Oried Kriff
1000	Clown Triggerfish A magnificent triggerfish that spawns in the deep subtropical and ropical waters of the world is an aggressive and renouls aimmal. The Clown managers are and sendous aimmal. The Clown feed as all views and must be mandated in a larger aquarism with larger fish Specific Gravity — 1 022. Temporative — 28 F (26.1).	Total Marine Flake and Pellet, Freeze-Oried Krill
	Coral Seauty Angeltish A darkly colored stumming angelfish from the shallow waters of the indian Organ is a gentle and sociable waters of the indian Organ is a gentle and sociable Gravity — 1 022 Temperature — 78 f (26 C) The Crail Seauty will grow to 5 inches (12 cm) and feeds and swims at all levels	Total Marine Flake and Pellet Freeze-Oried Plankton
	Regal Tang A schooling fish from the Philippines is known as the A schooling fish from the Philippines is known as the A schooling fish from the Regal Tang is paracted and ideal for the community manner aquarum Societie Gravity — 1 022 Temperature — 78 F (26 G). The Regal Tang will grow to 10 mches (26 cm) and feeds and swirns at all levels	Total Marine Flake and Pellet Freeze-Dried Krill
	Yellow Bellied Blue Damse! This appressive damselfish from the Philippines is a had occar be refused from the Philippines is a had occar be refused from the Philippines is a had occar be refused from the Philippines and rock formations. Specific Branty — 1022 Femperature — 78 F (26 C) I'm Blue Damsel will grow to 4 inches (10 cm) and it is recommended to have only one per aquarum.	Total Marine Flake and Pellet Freeze-Oried Plankton
	Bluestreak Cleaner Wrasse Performs a socio-ecological function in the Red Sea and Pacific and Indian Coleans by removing parasites and Pacific and Indian Coleans by removing parasites Temperature — 78 F (26 G) The Cleaner Wrasse will grave 15 Enches (12 cm) and should be introduced to mature aquariums only	Total Marine Flake Freeze- Dried Plankton
	Twinspot Wrasse This beautiful winses is plentiful along the reefs of the Wistern Indian Cean An excellent community manner fish for larger tanks awms and feeds at all levels. The Winspot Sietepa and hides in the sand and fish (26 C). The Twin Spot will grave to fish (26 C). The Twin Spot will grave to dispersion of the sand and fish (26 C). The Twin Spot will grave to dispersion of the sand and fish (26 C).	Total Marine Pellet, Freeze- Dried Plankton and Freeze- Dried Knill

CONTROLLING
DISEASES IN AQUARIUMS

The best way to keep your fish healthy is to follow the basic rules of good aquarium management. Feed the recommended tools in specified amounts, maintain the tools in specified amounts, maintain the year of the properties of th

When your fish are sick they show it in ther behavior — by keeping ther by keeping the first clamped, by shaking their bodies, by constant soratching against objects in the tank, by thingin is corress, or by asysting at the surface. Fortunately, most aquarium fish diseases can be treated successfully if caught in time. WARDLEY has a full range of aquatic medications carefully.

compounded under laboratory standards.

THE WARDLEY Rx range of remedies, traditional — and highly effective — treatments, rely on specific fluuid dosages. The two most common diseases of freshwater fish are lck and Fungus.

lck (which is short for the scientific name lchthyophthirus multifilis, the protozoan parasite that causes the disorder), is the most common aquarium fish disease. The most characteristic sign is the appearance of tiny white spots on the fins and body

FLAGUES
CONTROL
OF THE POPULATION
OF THE POPULAT



of the affected fish. Sometimes the fish begins scratching even before the spots appear. The spots (which are parasite-containing cysts embedded in the skin) are white and about the size of grains of granulated sugar. When the parasites mature they drop to the bottom of the aquarium where they rapidly multiply. The resulting free-swimming parasites then move about the aquarium actively seeking fish as hosts.

WARDLEY RX ICK CONTROL and WARDLEY RX FUNGUS CONTROL are highly effective in controlling the

lck parasite. The causative organisms should be under control within three to five days. Severe infestations can take longer to control.

PROMETHYASUC CONTROL
PP DE CON

If you are not sure that your fish are infected with lex (if, for example, you notice them scratching but do not see any whet spoels, use WARDLEY FX PROMETHY-SUL. This broad-spectrum medication is dreal when you are unsure of an exact diagnosis and can be used as a pre-trainment when introducing new fish into the aquarium. Another fairly common disease is a frugue scalled Sopplegian. It attacks injured fishs, with a pultry whitish growth on the affected parts. Furngus may be caused by brusing the fish. This occurs when the fish is roughly netted, and it also can follow damage caused by one fish attacking another. The use of WARDLEY RY FUNGUS CONTROL will correct this condition.

Fish Diseases

DISCUS WITH BODY FUNGUS SIGNS: Cottony white tufts on body surfaces. Results from extreme stress conditions like fighting, extremely poor water quality, damage from parasites. TREATMENT: WARDLEY Rx FUNGUS CONTROL.





SPOTTED HEADSTANDER WITH TAIL ROT SIGNS: Fin surfaces look dull white, shredded or partially missing.

Results from overcrowding, fighting, external parasites and unfavorable water conditions. TREATMENT: WARDLEY Rx PROMETHYASUL.

HATCHETFISH WITH ICK SIGNS: Raised white spots about the size of a grain of salt on body and fins. Results from attack by parasites. TREATMENT: WARDLEY RX ICK CONTROL. WARDLEY RX Fungus Control.





BLUE TETRA WITH BACTERIAL PROBLEM SIGNS: Red spots on body surface. Results from unusual stress conditions such as fighting and heavy parasite infestation. TREATMENT: WARDLEY RX PROMETHYASUL.

GOLDFISH AND ANCHOR WORMS/FISH LICE. SIGNS: Both anchorworms and fish lice are parasitic crustaceans. Anchor worms look like threads waving from the body; fish lice look like small brown flattened bodies attached to the fish. TREATMENT: WARDLEY By PARASITE CONTROL.





BLUE GOURAMI WITH GILL FLUKES SIGNIS: Lack of appetite, lingering near water surface, red discoloration of gills; body surface may take on light gray color. Gill flukes are external parasites; stressed fish are more susceptible to infestation. TREATMENT: WARDLEY RX PROMETHYSION.

ANGELFISH WITH MOUTH FUNGUS SIGNS: White cottony growth on mouth, sometimes extending toward gill area. Results from unusual stress such as poor water quality, overcrowding or mouth abrasions. TREATMENT: WARDLEY REPROMETHY





erratic swimming, loss of weight.

Results from infestation by sporozoan
parasites. TREATMENT: No effective
treatment known. Suspect fish should be removed immediately.

NEON TETRA WITH NEON

OUTDOOR POOLS & PONDS

Keeping fish, primarily goldfish and koi, in outdoor pools and ponds is becoming more popular. Outdoor ponds, when designed properly and placed in a garden setting, provide a beautiful and tranquil environment in which to enjoy a collection of fish.

Types of Ponds

Construction of a pool or pond can be simple and relatively inexpensive or complicated and costly. If you want a large pool formed of concrete or similar construction, you are going to pay a good deal unless you can do the work

yourself. Much less expensive pools can be constructed from heavy plastic or other waterproof "liners". Such interes can be placed in the ground (the liner laste the configuration of a hollow you scopp out) or above it the liner is draped within a frame you construct). Rigid and semi-rigid molded pools, usually of plastic, are available. Some of the laster children's wading pools can also be used. Filtered outdoor pools can ream is passfring clear. Some filters can be used to provide excling founds and wo waterfall effects within the pool, creating vistas of legal deady? In your great within opy persanting and resistening the water at the same time. You retail per laud beauty in your great within opy persanting and resistening the water at the same time. You retail per pools all year long but, in colder regions, it is safer to move them into indoor quarters if there is a disapper hat the water in the pool with freeze solid, Goldfish and kop pools should be deep enough, at least a minimum this inches (44 mm), so that they do not cool or heat up to quickly by surrounding air temperatures. The pool should not be overly deep, however, as deep pools as edifficial to clean properly.

Pond Location and Algae Control

The location of the pool is very important. It should not be situated so that it receives constant full sunlight, as exposure to the sun will overheat the water and cause a tremendous explosion in the population of suspended green algae, Gying the water the appearance of a thick green soup. WARDLEY ALLOLEAR III *A GIGIDE FOR OUTDOOR PONDS will effectively control such algae, but the best way to keep algae down is to use a combination of good site selection, good filtration and the use of ALLOLEAR III (MOTE: care should be taken







when using ALLCLEAR II, as it may be harmful to some aquatic plants). At the same time, the pool should not be completely shaded, either, as some sunlight is beneficial to the fish and most certainly needed by the plants. Do not place the pool directly under a tree or large bush. Since too many leaves can enter the water and change













Popular Species of POND FISH	Characteristics	Feeding Recommendations
	Fail As a considered to be the king of pond fair. This having bearfull (explaying that can grow to be four fair in length and there a life span of 10 years a Japanese band to are a life span of 10 years a Japanese band to are span of 10 years a Japanese band to are span of 10 years and the span of 10 years a years and the span of 10 years and year span of 10 years and year to be and over the span of 10 years and year to be and over the span of 10 years and year span of 10 years and year span of 10 years and 10 year span of 10 years span of 10 y	Pond Stor, Pond T E N. Kol T E N. (Juvenile and Adult Granulerium). Pondition fraud, Granulerium). Pondition fraud, Granulerium, Pondition fraud,
	Common Goldfish The Common Goldfish is just about the utimate beginner's pond fish. This egglayer swims at all ranges and enjoys planted and rocky environments.	Pond Stox, Pond T.E.N., Goldfrish T.E.N., (Juvenile and Adult formulations). Poolfish Food Pond Flakes

its chemical composition. WARDLEY SENIDR DELUXE pH TEST KIT will enable you to monitor the water in the pool and determine whether it's turning acid as the result of a buildup of decomposing organic compounds.

Aquatic Plants

Water likes, hyacinits and other aquatic plants add bright color and interest to the pool and help to provide refuge for the fish. Pools done thave to have a dirt bottom in order to grow plants successfully. Decause water filies fand other plants) can be placed in soil-holding post. Additionally, some plants can be left to float free, they need no comechoi with soil at all. Water lettuce (pissls) and water hyacinific colorhomia; are examples of floating plants that provide refuge and shade. Their roots are excellent places in which spawning goldfish, koi and other each occupation that can shed their cook.

Feeding Pond Fish

Feeding goldfish and koin in an outdoor pool or pond is not difficult. Dince the fish have learned to associate your presence at the edge of the pool with feeding, they will sate be load or gold the pool with leading, they will sate the load of pill from your fingers. The fact that what DLY POIN TEN LATING STOR, COLORBH TEN PELLETS and WARDLEY POIN TEN LATING FOOD, COLORBH TEN PELLETS and WARDLEY FOOD STOR "A LATING FOOD, COLORBH TEN PELLETS and WARDLEY FOOD STOR" A LATING FOOD, COLORBH TEN PELLETS and WARDLEY KNOT STORY TEN STORY TO STORY THE PELLETS and WARDLEY KNOT STORY TEN STORY TO STORY THE PELLETS and WARDLEY KNOT STORY THE PELLETS and WARDLEY KNOT STORY THE PELLETS and WARDLEY KNOT STORY THE PELLETS AND THE PELLETS A

WARDLEY POND FLAKE FOOD and WARDLEY PELLETED POOLFISH FOOD, used in conjunction with Wardley Intaining foods, will provide a wide variety of nutritious growth-producing foods stuff sor your fish. WARDLEY CONDITIONER GOLDFISH FOOD is a sinking pellet that has been formulated specifically to provide extra protein enrichment at spawning and is also excellent for providing added variety.

Goldfish and koi should have their water treated for the removal of harmful chlorine and chloramine the same way as indoor aquarium fish. WARDLEY RX PDDL SUPERCHLDR " has been made available in an economical 4 ounce (125 ml) bottle, which treats 2000 gallons (7560 liters) and is specifically for pool and pond use.

GOLDFISH CARE

Originally from China, goldfish have been kept as pets longer than any other fish. Goldfish are not tropical fish and do not like tropical temperatures; they do best at between 50°F and 70°F ("0° to 21°C) in winter and 65°F to 72°F (18° to 22°C) in summer.

General Care



Coming from coulder values, which contain more oxygen hair warmer waters polled ha ne very associative to the effects of warmer waters polled hair new years of the effects of casping for air may be exteriencing oxygen deprivation due to high temperature or overcrowding and must be given immediate reliel. Small goldfish need about 20 square inches of surface are aper fish; medium-size goldfish need double that (surface area is determined by multiplying the length times the width of your qualitum). Goldfish have benefit presely from good areation and, because they are bottomguishing list that continually pole in the grave, are ifficient filter is a sersible investment.

chlorine and chloramine in their water; all water intended for use with goldfish should be treated with WARDLEY Rx ONE-DROP SUPERCHLOR or WARDLEY SUPERCHLOR PLUS to condition it property.

Goldfish Nutrition

Goldfish require a balanced diet that incorporates vegetable, animal, nimeral and witamin components in the proper amounts. WAROLEY GOLOFISH FLAKES, WAROLEY GOLOFISH FLOOG (granules), WAROLEY TOTAL GOLOFISH " and WARDLEY

Wardley
DIAL
A-DIET

- OSCORDA POOR
TOURN 1 AUGUST

GULUFSH FULU (granules), WARLLEY
TOTAL GOLOFSH "and WARDLEY
GOLDFSH TEN (expanded floating pellets)
are the staple floods for goldfish in the home. They should be
alternated with WARDLEY PREMIUM GOLO" AND WARDLEY
CONDITIONER GOLDFISH FOOD before and after spawning time
and at other times when the lish have heavy untirional demands

TOTAL GOLDES!



placed upon them (such as when being treated for an illness) WARDLEY DIAL—A-DIET for GOLDFISH, provides an excellent variety of bods. The assortment of lour different lood types includes, GOLDFISH FLAKES, CONDITIONING SOLDFISH sinking pellets, SOLDFISH TEN forating pellets and sun dried shrimp. Remember that variety is the keynote to success in feeding goldfish and other type of lish as well. All fish have been shown to grow, thrive, and the longer when their owners follow this simple rule: feed a variety of foods.

Goldfish Disease Goldfish can develop many of the same disorders as tropical fish. Qiseased goldfish clamp their fins, exhibit listless behavior, eat less, and swim erratically, often with scratching motions. In addition to the specific remedies advised for use with tropicals, a simple treatment for ridding oddfish of



parasties is to place the fish in a diule solution of WARQLEY ADLISALINE for a week to ten days. Use approximately one level teapson of AQUISALINE for every five gallons of water. Aeration should be employed during the treatment. WARQLEY GOLOFISH BLOCK NEUTRALIZER adds in minimizing odors and supplying needed minerals. The neutralizing block must only be used in fish bowls or aquaintims of the block Remember that fish under treatment school be delies he avely but with high-protein foods. If you have been using staple goldfish foods, switch to conditioning foods during the teatment.

Popular Species of GOLDFISH	Characteristics	Feeding Recommendations
	Commoa This fish is sold to the hobbyist mostly to be fed to larger species of aquarum fish Average water conditions— pt 7 2 to 7 8 Temperature— 55 to 75 degrees F Eggglaye, smms all ranges, enjoys plainted and rocky aquarum.	Goldhish Flakes, Goldhish TE N Small Pellet, Goldhish Deitte (supplement), Goldhis Neutralizer Block to help bowl or aquanum water quality
	Comet This fish is the most popular goldfish sold for bowls and aquariums. Average water conditions — pH 7 2 to 7.8 Temperature 65 to 75 degrees F Eggiyer, swims all ranges, enjoys planted and rocky aquanium	Goldfish Flakes, Goldfish TE.N. Small Pellet, Goldfish Delite (supplement), Goldfis Neutralizer Block to help bowl or aquarium water quality
	Bubble Eye A faincy species of goldfish sold for bowls, aquarums and other indoor and outdoor ponds. Average water conditions.— \$17.2 to 7.8 Temperature.—\$5 to 75 degrees F Egglaver, swims all ranges, enjoys planted and rocky aquarum.	Premium Gold, Goldfish T.E.N. Small Pellet, Goldfish Delite (supplement), Goldfis Neutralizer Block to help bowl or aquanum water quality
Col	Black Bubble Eye A fancy species of goldfish sold for bowls aquarums, and often indoor and outsfoor points. Average water conditions——pl 7 z to 7 8. Temperature ——5 to 75 degrees F Egglayer, swims all ranges, enjoys planted and rocky aquarum	Premium Gold, Goldfish TE N Small Petet, Goldfish Deline (supplement), Goldfis Reutralizer Block to help bowl or aquarium water quality
	Pearl Scale A fancy species of goldfish sold for bowls, aquanums and often indoor and outdoor ponds. Average water conditions — ptf 7 c 10 7 8 Temperature — 65 to 75 degrees F Eggayer, awms all ranges, encys blanted and rocky aquanum.	Premium Gold, Goldfish TEN Small Pellet, Goldfish Delite (supplement), Goldfis Neutralizer Block to help bowl or aquarium water quality
	Factail A fancy species of goldfish sold for bowls, aquarums and other indoor and utilized points. Average water conditions — pH 7.2 to 7.8 Temperature — 65 to 7.5 degrees F Epglayer, swims all ranges, enjoys planted and rocky aquarum	Premium Gold, Goldfish TEN Small Pellet, Goldfish Delde (supplement), Goldfe Neutralizer Block to help bowl or aquanium water quality
	Calico Fantali A fancy species of goldfish sold for bowls, aquaniums and often indoor and outboor points. Average water conditions— PM 7.2 to 7.8 Temperature— 65 to 7.5 degrees F. Egglayer, swims all ranges, enjoys planted and rocky aquanium.	Premium Gold Goldfish TE N Small Peliet, Goldfish Delite (supplement), Goldfis Neutralizer Block to help bowl or aquarium water quality
X	Black Moor A fancy species of goldrish sold for bowls, aquarisms and often indoor and outdoor ponds. Average water conditions — pH 72 to 7 B. Temperature — 65 to 75 depts = F. Egglayer, swims all ranges, enjoys planted and rocky aquarisms.	Premium Gold, Goldfish TEN Small Pellet, Goldfish Delite (supplement), Goldfi Neutralizer Block to help bowl or aquanum water quality





Turties are safe to keep if they are large enough (Federal regulations prohibit the sale and/or distribution of turties less than four inches (10 mm) in shell length) and are maintained in a healthy environment. The three most important considerations in keeping aquatic turties healthy are proper temperature, proper sandation, and proper feeding.

Temperature Requirements

Most pet aquatic turtles come from very warm areas, so they need heat to do well. A turtle's level of activity depends greatly on the temperature of its surroundings; at a relatively warm temperature (75° to 85°F) (24° to 29°C); the turtle is very active. If a pet turtle is very too cool and in a steady temperature of less than 75°F (24°C) they will become sluggish and susceptible to linesses.

If you keep you' Turlies in a regular aquarium, use an aquarium heater to provide warmth. If you keep them in a standard plastic turlie bowl, use a low-wrattage dobut 60 watts) incandescent bubl. Place the lamp so that the bubl is about nine inches (23 mm) above the highest point in the bowl. You can vary the wattage of the bubl and the distance between the bubl and the bowl to increase or decrease the amount of the approvided.



Proper Sanitation

Providing proper santation for your furties is easy! I you keep them in bowls or small fish tanks, change their water often; once a day is not too much! If you keep them in tanks that are too big to move and empty easily use a good aquarum filter and make regular partial water changes. When you change the furties' water, match the temperature of the new water to that of the old. After degrees warmer will not furt, but do not ever chill your pels by changing their water from warm to cold. Always wash your hands will belove and after cleaning own turtue container.

NET WIT SHE ARE SEED THAT IS A WASH YOUR INFORMATION AND HE DELONE AND ALL BE LOBBRING BY UNIT UNIT OF LOBBRING THE AND ALL BE LOBBRING BY UNIT OF LOBBRING BY UNIT OF

NEW Nation Could prefer all interested injudicies a control periodic citized in lieight of use water with venuorities. SENSON DELUZES of IT Card server as a check on the water's quality. Water that is turning foul as the result of ecomposing food and wrist perioducits with have a tendency to become statedly more acidic. VRRDLEY TURTLE BLOCK NEUTRALIZER will help to jurily the turtles' water and will retard fouling, which must be used in bowls and aquainum equipped with aeration and filtration, as the water must circulate for proper dissolving of the block.

Turtle Nutrition

Turties benefit from being provided a variety of nutritious foods. Wardley offers that variety in WARDLEY REPTILE TEN (these vitamin enriched floating stokes are accellent daily flood aquatic reptiles), WARDLEY TURTLE FOOD FLAKES, a calcium-and variamin-enriched flase food and WARDLEY TURTLE EUITE, whole ded shrimp, are nutritious supplemental foods for all aquatic reptiles.





Popular Species of AQUATIC REPTILES Common Map Turtle The Common Map Turtle is omnivorous. The females also feed heavily on plants. They require an aqua-terranum environment with a warm, sunny land section. Adult females grow to 5 to 12 inches (12-28 cm) males are substantially smaller

Characteristics

Feedina

Recommendations Reptile T E N , Turtle Food, Turtle Delite, Turtle Food



Red Eared Slider The Red Eared Slider Turtle is the best known and most popular spefrom the eastern USA to northern plant material as size increases environment with a large water section. Due to rapid growth an indoor agua-terrarium gurckly becomes a problem North American species can be moved to outdoor ponds if precautions are taken to

Reptile T E N , Turtle Food, Turtle Delite Turtle Food



avoid cold damage. This turtle will African Underwater Frog

and drow to 5 inches (13 cm) These animals should be kept in a spacious, shallow aquarium at hiding places, for example driftwood and rocks. These unique creatures swim forward and backward and usually stay close to the lower water layer,

Turtle Food, Turtle Delite,



Water Newl

Also called the European Newt aquarium during the spring and in a damp terrarium for the remainder of the year, avoid high sun. The European Newt wift grow to 7 inches (18 cm)

Reptrie T E N . Turtle Food,





The amount of food a furtle will eat depends mainly on the size of the animal and the temperature. The warmer their surroundings, the more they eat and the faster they will four the water. Make sure you change their water often. Never leave uneaten food with the furthe bowl or aquarium. Remove uneaten food within the minutes. Keep in mind that aquartic nutries cannot swallow their food unless they can submerge in water. Listed below was some important of os and don't shart will maintain your ore further.

Listed below are some important do's and don'ts that will maintain your pet turtl in a "clean environment."

TEN COMMANDMENTS OF TURTLE CARE

- Do make certain, when you purchase a pet furtle, that it's eyes are bright, its shell is firm and the tank it's displayed in is clean — and never accept a turtle unless its shell is at least four inches (10 mm) long.
- Do make certain your turtle is maintained in a warm, even temperature (not lower than 75 degrees F) (24 C).
- Do keep your turtle tank clean. Change the water daily in the bathroom not the kitchen.

 Do not allow children, who are not
- Do not allow children, who are not responsible enough to wash their hands after contact, to handle turtles.

 Do provide your turtle with an island

or bridge.

- Do make sure your turtle gets sunshine as often as possible — but also make sure that it has a refuge to retreat to when it wants to get out of the sun.
- Do make sure the water is deep enough to allow your pet turtle to swim freely.
- 8 Do not keep your pet turtles in the kitchen.
- Do not allow uneaten food to stand in the turtle tank
- Do not allow household pets to drink from tanks or other containers which house your pet turtle.

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